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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,381	01/11/2002	Sheree H. Wen	2929/66587	8929

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EXAMINER

HOPKINS, ROBERT A

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,381

Applicant(s)

WEN, SHEREE H.

Examiner

Robert A Hopkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- ☐ Interview Summary (PTO-413) Paper No(s) ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 3,6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 line 10 recites "moxalactam, loracarbef" Examiner notes that for a proper markush expression, the term —or—should be inserted between "moxalactam" and "loracarbef". Appropriate correction is requested. See MPEP 2173.05(g).

Claim 6 line 2 recites "titanium, and copper mesh". Examiner notes that for a proper markush expression, the term —or—should be substituted for "and". See MPEP 2173.05(g).

Claim 10 line 2 and claim 21 line 2 recites "active ingredient may be". Examiner notes that for a proper markush expression, the term – is – should be substituted for "may be". See MPEP 2173.05(g).

Claim 17 line 2 recites "silver, zinc, titanium, copper, or iron oxide, in the form of a mesh". Examiner is unsure if just the iron oxide is in the form of a mesh or all of the listed metallic agents are in the form of a mesh.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-13 and 21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Deibert(6063170).

Deibert teaches a filtration unit comprising an active stage and a passive stage, the passive stage(13) for filtering out particles above a predetermined size, active stage(moving belt 18) containing at least one agent to kill ambient bacteria and viruses(column 2 lines 55-57), an intake port(29) permitting contaminated air to enter the filtration unit, and an exhalation port(31) through which decontaminated air may be expelled. Deibert further teaches adsorbent media(27) for removing toxic or harmful substances and fluids from air which enters the filtration unit. Deibert further teaches wherein the active stage additionally comprises a UV light source(14) effective to destroy bacteria and viruses. Deibert further teaches wherein the active ingredient is a fabric containing the active ingredient.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 11,12, and 21 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Forsyth(6190437).

Forsyth teaches a filtration unit comprising an active stage and a passive stage, the passive stage(12) for filtering out particles above a predetermined size, active stage(20) containing at least one agent(iodine resin) to kill ambient bacteria and viruses(column 3 lines 14-21), an intake port(28 in figure 4) permitting contaminated air

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to enter the filtration unit, and an exhalation port(38) through which decontaminated air may be expelled. Deibert further teaches adsorbent media(14) for removing toxic or harmful substances and fluids from air which enters the filtration unit. Deibert further teaches wherein the active ingredient is a solid containing the active ingredient.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandebelt et al(6434785) taken together with Bilde(1891256).

Vandebelt et al discloses a hand-held vacuum cleaner comprising a vacuum cleaner body(14) having a handle(16) and housing an electric powered motor powered by a battery with a switch(20) disposed between the battery and the blower, an intake portion(12) releasably connected to the vacuum cleaner body such that the intake forms an airtight seal with the vacuum body, the vacuum cleaner having an intake opening, an exhaust portion, and a filtration system disposed therebetween to filter contaminated air drawn through the intake opening, the filtration system including a passive stage(HEPA 76) to filter out airborne particles above a predetermined size. Vandebelt et al is silent as to an active stage including at least one agent effective to kill ambient biological contaminants. Bilde discloses a portable vacuum cleaner having a vacuum cleaner

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body, an intake opening, an exhaust portion, and a filtration system including a passive stage(24) to filter out airborne particles above a predetermined size and an active stage(37) including at least one agent effective to kill ambient biological contaminants.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide an active stage including at least one agent effective to kill ambient biological contaminants within the vacuum cleaner of Vandebelt et al in order to provide for a disinfectant function along with a filtration function.

Vandebelt et al taken together with Bilde disclose all of the limitations of claim 3 and 4 but is silent as to the agent in the active stage being an agent from the list in claim 3 and lysine enzyme in claim 4. Examiner respectfully submits that active agents are well known to destroy or render harmless bacteria(see applicant's specification page 9 lines 5-6), therefore it would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a well known active agent for the disinfecting agent of Bilde to provide for a proper removal of bacteria and viruses in the airborne flowpath.

Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandebelt et al(6434785) taken together with Bilde(1891256) in view of Deibert(6063170).

Vandebelt et al taken together with Bilde disclose all of the limitations of claim 2 but is silent as to wherein the active stage additionally comprises a UV light source which emits UV light at a frequency and intensity effective to kill biological contaminants contained in the contaminated air. Deibert discloses a filtration system including an

intake port, exhaust port, HEPA filter, germicidal treatment area, and a UV light source(15). It would have been obvious to someone of ordinary skill in the art at the time of the invention to include a UV light source within the vacuum cleaner of Vandebelt taken together with Bilde in order to provide ultraviolet emission effective in the killing of bacteria(column 2 lines 47-50 of Deibert).

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandebelt et al(6434785) taken together with Bilde(1891256) in view of Sheldon(6333004).

Vandebelt et al taken together with Bilde disclose all of the limitations of claim 6 but is silent as to wherein the active stage additionally comprises one or more metallic agents effective to kill ambient biological contaminants. Sheldon discloses an air filter for filtering contaminants from an airflow, the air filter including a copper mesh(column 4 lines 46-47) surrounding the air filter. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide an active stage which additionally includes a copper mesh agent along with the antiseptic active agent of Bilde to prevent bacteria, fungi, algae, and other contaminants from growing(column 4 lines 43-45).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vandebelt et al(6434785) taken together with Bilde(1891256) in view of Tribelski(6468433).

Vandebelt et al taken together with Bilde disclose all of the limitations of claim 7 but is silent as to wherein the active stage additionally comprises an IR light source or

magnetic field generator. Tribelski discloses destroying bacteria and viruses in a gas flow using an IR light source. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide an IR light source in order to destroy biological organisms having a required frequency specific light sensitivity(column 12 lines 43-46 of Tribelski).

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandebelt et al(6434785) taken together with Bilde(1891256) in view of Deibert(6063170) and further in view of Seifert, deceased et al(4468372).

Vandebelt et al taken together with Bilde in view of Deibert disclose all of the limitations of claim 8 but is silent as to wherein the active stage additionally comprises an electric or magnetic field generator to separate airborne particles from contaminated air. Seifert, deceased et al discloses an apparatus for destroying biological material in an airflow including a cartridge with germicidal agent and an electric field generator(32) to separate airborne particles from contaminated air. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide an electric field generator in addition to the active agent of Bilde to provide for collection of positively charged airborne particles and prevention of re-entry into the atmosphere of the room being cleaned(column 2 lines 65-68 of Seifert, deceased et al).

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Deibert(6063170) or Forsyth(6190437).

Deibert and Forsyth disclose all of the limitations of claim 3 and 4 but is silent as to the agent in the active stage being an agent from the list in claim 14 and lysine

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enzyme in claim 15. Examiner respectfully submits that active agents are well known to destroy or render harmless bacteria(see applicant's specification page 9 lines 5-6), therefore it would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a well known active agent for the disinfecting agent of either Deibert or Forsyth to provide for a proper removal of bacteria and viruses in the airborne flowpath.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Deibert(6063170) or Forsyth(6190437) taken together with Tribelski(6468433) .

Deibert and Forsyth disclose all of the limitations of claim 13 but is silent as to wherein the active stage additionally comprises an IR light source or magnetic field generator. Tribelski discloses destroying bacteria and viruses in a gas flow using an IR light source. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide an IR light source in order to destroy biological organisms having a required frequency specific light sensitivity(column 12 lines 43-46 of Tribelski).

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Deibert(6063170) or Forsyth(6190437) taken together with Sheldon(6333004).

Deibert and Forsyth disclose all of the limitations of claim 16 but is silent as to wherein the active stage additionally comprises one or more metallic agents effective to kill ambient biological contaminants. Sheldon discloses an air filter for filtering contaminants from an airflow, the air filter including a copper mesh(column 4 lines 46-47) surrounding the air filter. It would have been obvious to someone of ordinary skill in

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the art at the time of the invention to provide an active stage which additionally includes a copper mesh agent along with the active agent of Deibert or Forsyth to prevent bacteria, fungi, algae, and other contaminants from growing(column 4 lines 43-45).

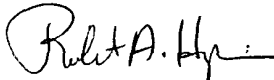
Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Deibert(6063170) or Forsyth(6190437) taken together with Seifert , deceased et al).

Deibert and Forsyth disclose all of the limitations of claim 19 but is silent as to wherein the active stage additionally comprises an electric or magnetic field generator to separate airborne particles from contaminated air. Seifert, deceased et al discloses an apparatus for destroying biological material in an airflow including a cartridge with germicidal agent and an electric field generator(32) to separate airborne particles from contaminated air. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide an electric field generator in addition to the active agent of Deibert and Forsyth to provide for collection of positively charged airborne particles and prevention of re-entry into the atmosphere of the room being cleaned(column 2 lines 65-68 of Seifert, deceased et al).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A Hopkins whose telephone number is 703-308-3913. The examiner can normally be reached on Monday-Friday 9:00am-3:00pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9572 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Robert A Hopkins
Primary Examiner
Art Unit 1724

rah
March 12, 2003